

**SIMILARITY-DRIVEN SYNTHESIS FOR EQUIVALENCE  
CHECKING OF COMPLEX DESIGNS**

Kuang-Chien Chen

5 Chih-Chang Lin

Cheng-Ta Hsieh

Yifeng Wang

**ABSTRACT**

10 A method for modeling a circuit design includes synthesizing the circuit design to create a first gate-level representation of the circuit design. The method also includes analyzing a second gate-level representation of the circuit design to learn architecture information, and resynthesizing the first gate-level representation of the circuit design to incorporate the learned architecture information from the second gate-level representation of the circuit design. A computer-readable storage medium has stored thereon computer instructions that, when executed by a computer, cause the computer to synthesize a circuit design to create a first gate-level representation of the circuit design. The computer instructions also cause the computer to analyze a second gate-level representation of the circuit design to learn architecture information, and resynthesize the first gate-level representation of the circuit design to incorporate the learned architecture information from the second gate-level representation of the circuit design.

15

20